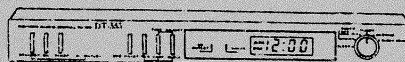


Service Manual



PIONEER
The future of sound and vision.



ORDER NO.
ARP1566

AUDIO DIGITAL TIMER

DT-555

MODEL DT-555 COMES IN TWO VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Destination
NEM	AC220V only	European continent
S/G	AC110V, 120V, 220V, 240V (switchable)	U.S. Military

- This service manual is applicable to the NEM and S/G types.

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
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1. SPECIFICATIONS

Time display	Digital display with fluorescent display tube
Timer type	24-hour type (AM/PM, 12-hour display)
Timer setting	Only one ON/OFF time setting in minimum units of minutes within a 24-hour period
Sleep timer	Setting in minimum units of minutes up to 1 hour 59 minutes
Time accuracy	Synchronized with line frequency
Timer accuracy	Within + 0.1 sec. of time displayed
Sleep timer accuracy	Within - 59 sec. of set time

Power section, others

Power requirements

..... AC110V/120V/220V/240V (switchable)
50Hz/60Hz (switchable)

AC outlets: Total of 2 outlets 1200W max.

Power consumption 6W

Other functions

- AC OUTLET "on" display (red LED lights)
- Timer operation display (green LED lights)
- Power failure display (time display winks)

Dimensions 420 (W) x 52 (H) x 144 (D) mm

16-9/16 (W) x 2-1/16 (H) x 5-11/16 (D) in

Weight 1.7 kg (3 lb 12 oz)

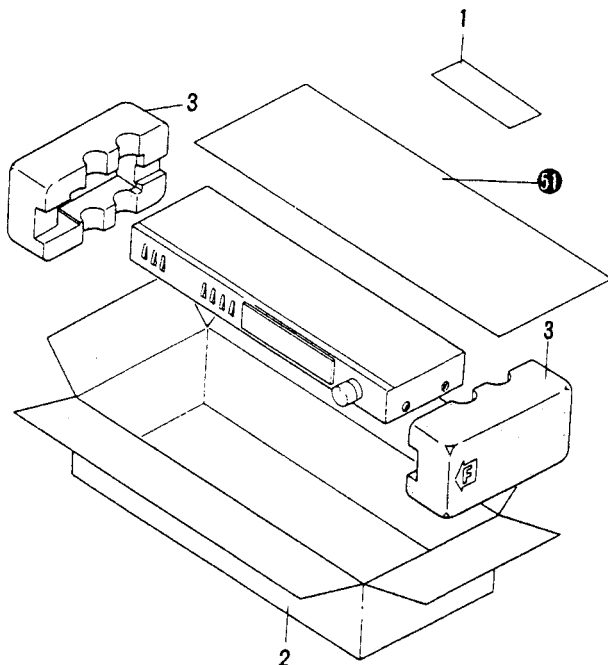
Accessories

Operating Instructions 1

NOTE:

Specifications and design are subject to possible modification without notice due to improvements.

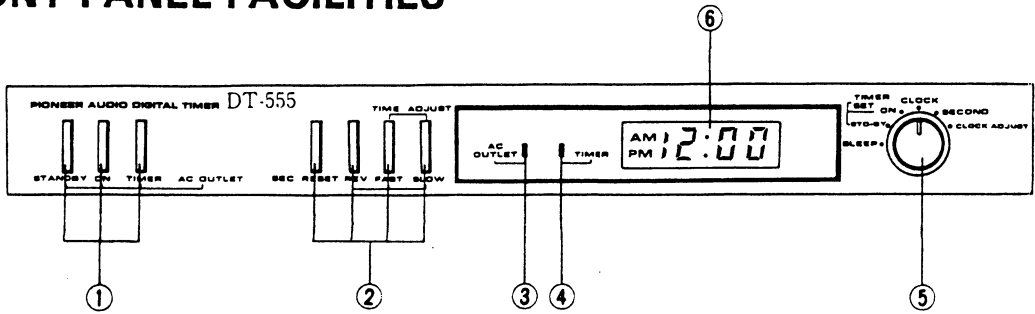
2. PACKING



Parts List

Mark	No.	Parts No.	Description
	1	ARE1090	Operating instruction
	2	ADH1478	Packing case
	3	AAA-258	Side pad
	51		Sheet

3. FRONT PANEL FACILITIES



1 AC OUTLET SELECTORS

These switch on and off the power flowing to the rear panel AC outlets.

STAND- Used to switch off the power of the connected audio components regardless of the timer operation (set times).

BY:

ON: Used to switch on the power of the connected audio components regardless of the timer operation (set times).

TIMER: Used to switch ON and OFF the power of the connected audio components with the timer operation.

2 TIME ADJUST SWITCHES

These are used to adjust the time/displayed times in line with the setting of the mode selector.

SEC RESET: When this switch is depressed with the mode selector in the SECOND position, the second display of the present time is reset to 00 and when released the seconds are counted up from 00 → 01 → 02 → etc., and the rightmost minute digit and seconds are displayed.

REV: When the FAST or SLOW switch is depressed while this switch is in the depressed position, the displayed time is reversed rapidly or slowly. (This function does not work when the sleep timer function is set.)

FAST: When this switch is depressed, the displayed time is forwarded rapidly.

SLOW: When this switch is depressed, the displayed time is forwarded slowly.

3 AC OUTLET INDICATOR (red)

This lights when power is being supplied to the AC OUTLETS on the rear panel.

4 TIMER INDICATOR (green)

This lights when the AC OUTLET-TIMER selector is depressed.

5 MODE SELECTOR

This is used to select the timer's function.

SLEEP: Used to set the operating time (1 minute to 1 hour 59 minutes) until the power of the audio components operating is to be set OFF.

TIMER SET-STD-BY: Used to set the time at which the power to the connected audio components is turned OFF.

TIMER SET-ON: Used to set the time at which the power to the connected audio component is turned ON.

CLOCK: Used to display the present time (hours & minutes).

SECOND: Used to adjust the seconds of the present time and check the seconds of the present time.

CLOCK ADJUST: Used to adjust the clock to the present time.

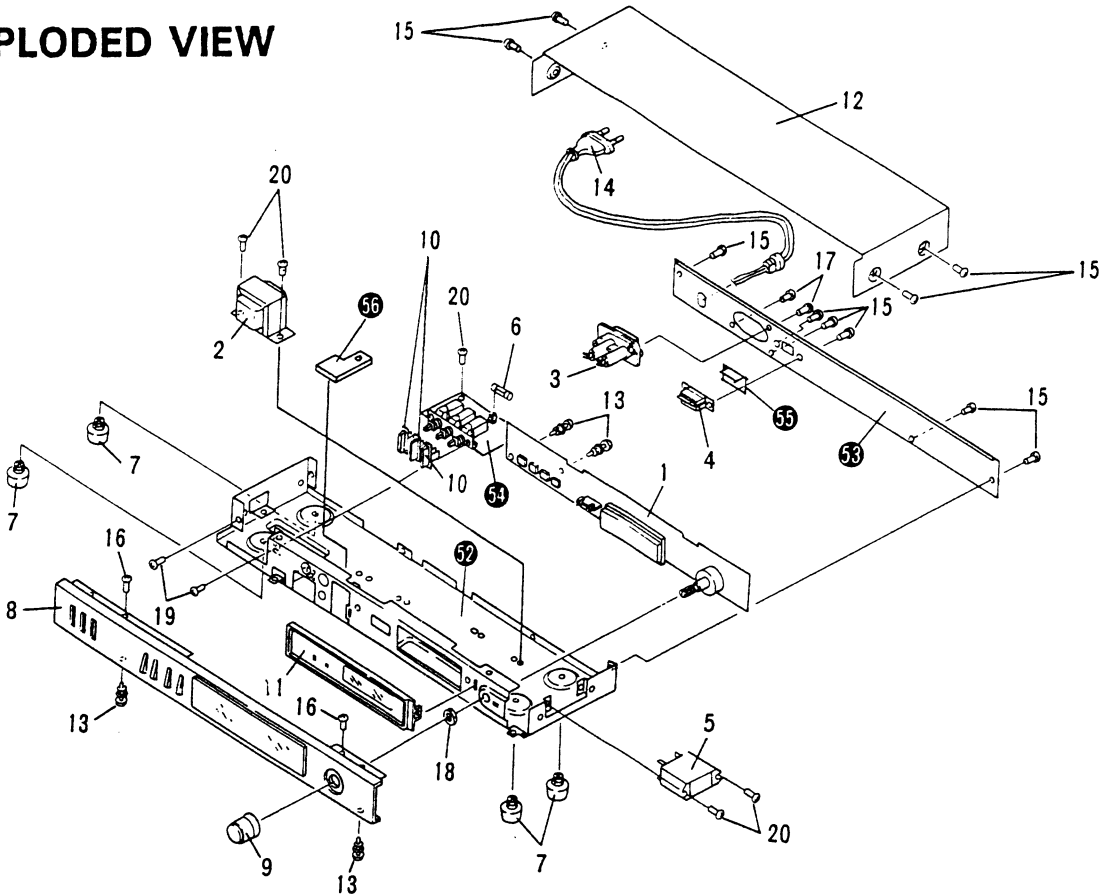
6 TIME DISPLAY

The time is displayed as it relates to the mode selector or TIME ADJUST switch settings in the following table.

Mode selector	TIME ADJUST switch	Display	Example of display
SLEEP	FAST	Time until sleep operation is due to go OFF.	1:30
	SLOW		1 hr 30 min.
TIMER SET-STD-BY	FAST SLOW REV	Display of OFF time set by timer.	AM 8:00
TIMER SET-ON	FAST SLOW REV	Display of ON time set by timer	AM 7:30
CLOCK	—	Display of present time	PM 5:38
SECOND	—	Display of seconds and rightmost digit of present time minute	8:25 8 min. 25 sec.
	SEC RESET	Display for adjusting seconds correctly of present time	5:00 5 min. 00 sec.
CLOCK ADJUST	FAST SLOW REV	Display for adjusting hours and minutes of present time	PM 12:05

NOTE:
When the unit's power plug is connected to a household AC outlet, the "AM 12:00" or "0:00" time display will wink. It also winks when there has been a power failure while the unit was working and the power has been restored.

4. EXPLODED VIEW



NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .
 $\star\star$ GENERALLY MOVES FASTER THAN \star
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "©" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

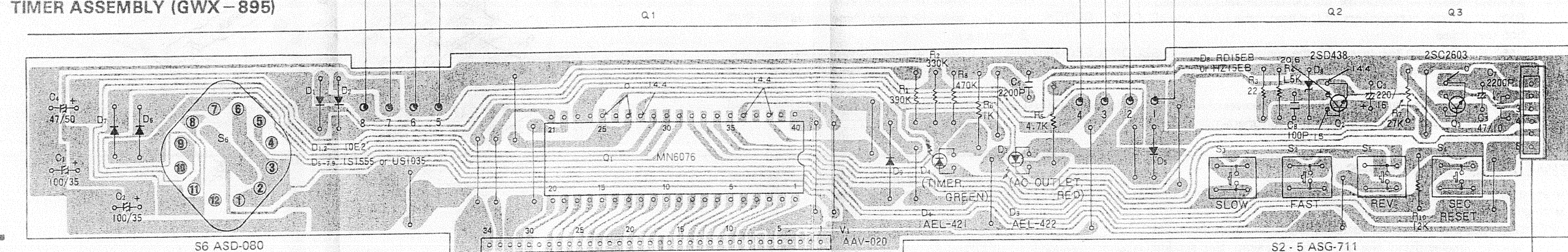
Mark	No.	Parts No.	Description		
	1	GWX-895	Timer assembly	13	AEC-510 Nylon rivet
Δ \star	2	ATS-012	Power transformer (AC220V)	14	ADG1021 AC power cord
Δ	3	AKP-026	AC socket (AC OUTLET) (500W MAX)	15	BBT30P080FZK Screw
Δ $\star\star$	4	ASH-501	Slide switch (POWER S7)	16	BCZ30P080FMC Screw
Δ $\star\star$	5	ASR-507	Relay	17	MTZ30P100FZK Screw
Δ $\star\star$	6	ASR-507	Fuse (T2.5A/250V)	18	NK90FUC Nut
	7	AEC-903	Leg assembly	19	PMZ30P060FZB Screw
	8	ANB1223	Front panel assembly	20	VBZ30P060FMC Screw
	9	AAB-420	Rotary knob (MODE)	51	.....
	10	AAD1429	Push knob	52	Chassis
	11	AAK1552	Sub panel	53	Real panel
	12	ANE1017	Bonnet case	54	Switch assembly
				55	Switch spacer
				56	Insulation sheet

5. P.C.BOARDS CONNECTION DIAGRAM

A

TIMER ASSEMBLY (GWX-895)

B

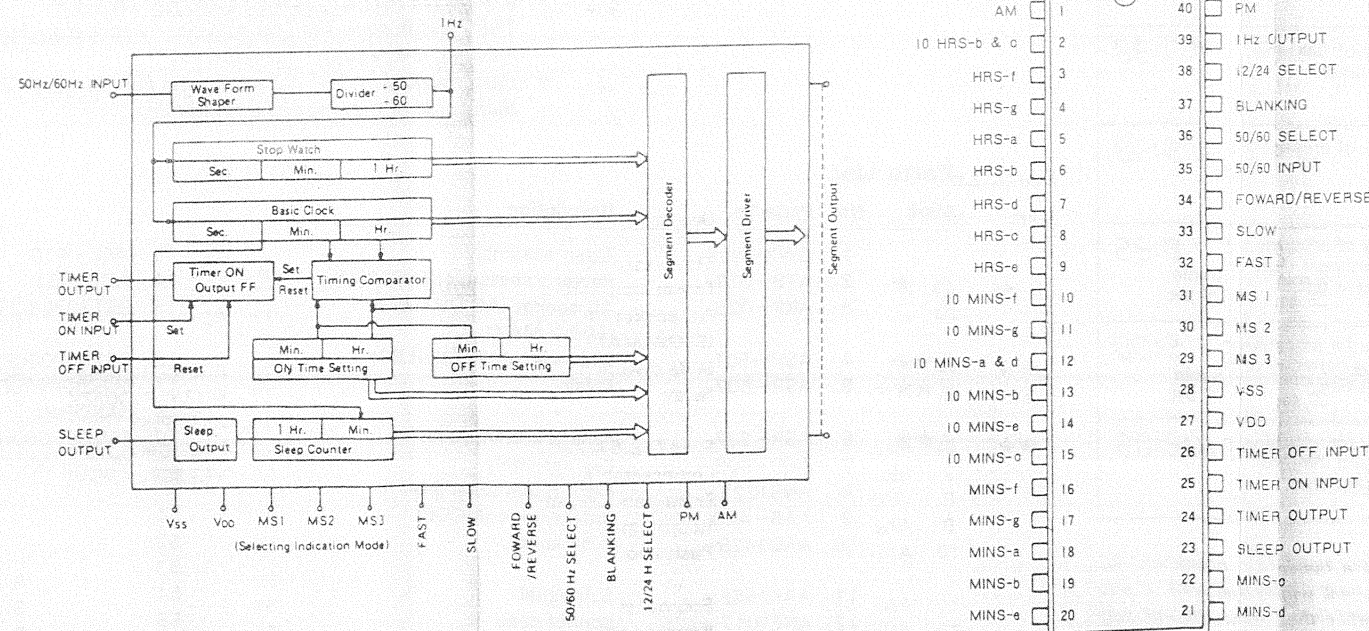


A

B

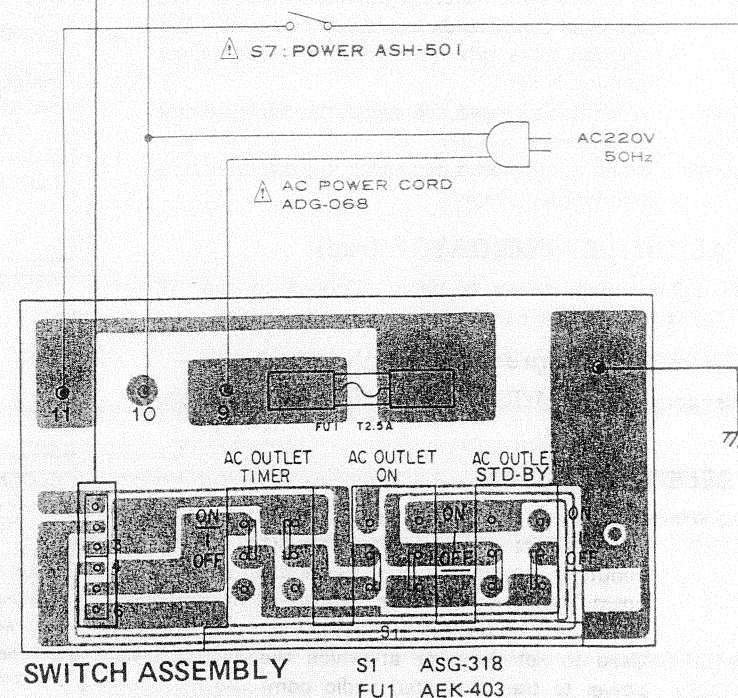
C

MN6076 Block diagram and Pin arrangement diagram

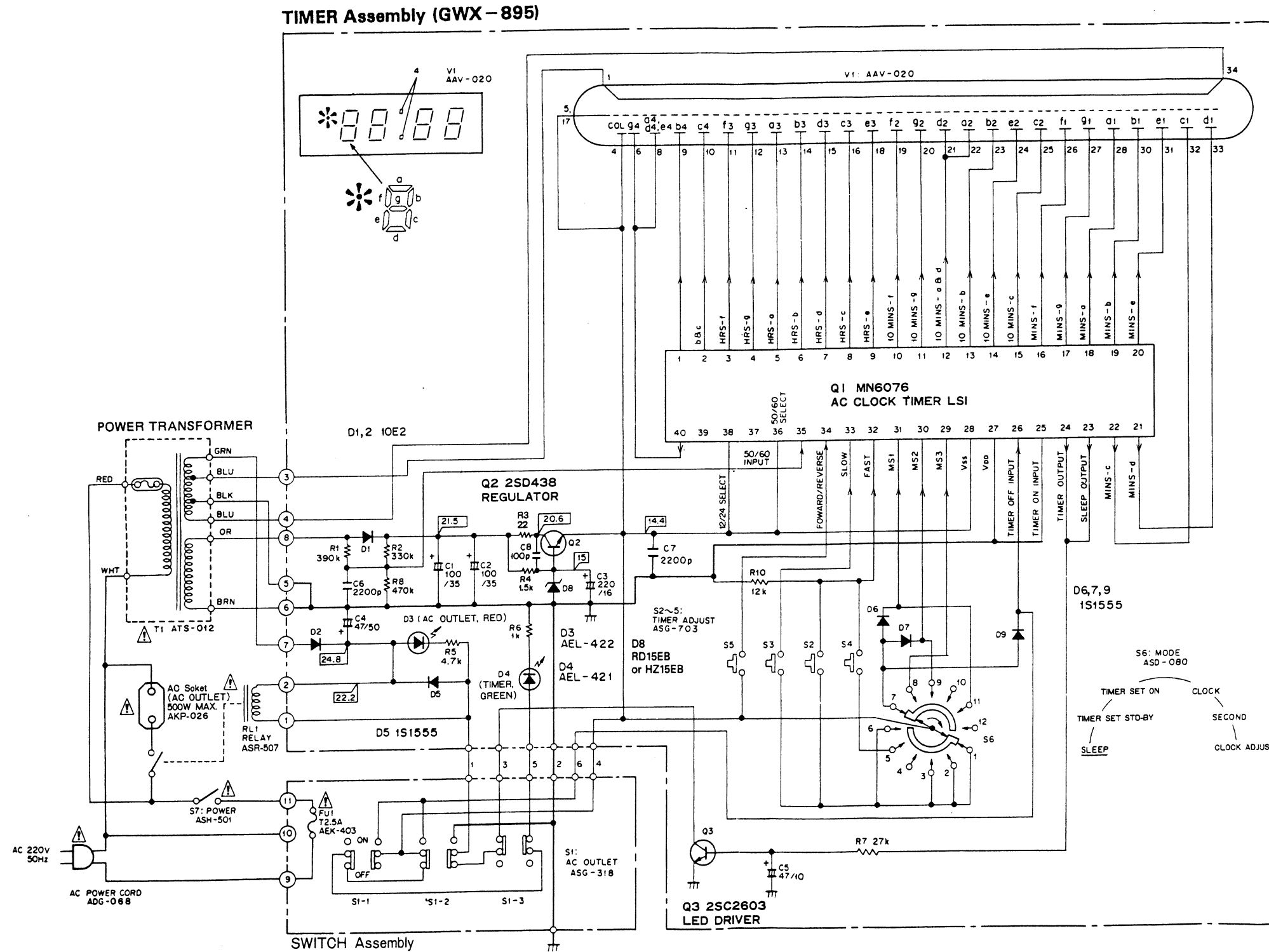


C

D



6. SCHEMATIC DIAGRAM



1. RESISTORS:
Indicated in Ω , $\frac{1}{2}W$, $\pm 5\%$ tolerance unless otherwise noted k : k Ω ,
M : M Ω , (F) : $\pm 1\%$, (G) : $\pm 2\%$, (K) : $\pm 10\%$ tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE
□ : DC voltage (V) at TIMER, RELAY ON.
Value in () is DC voltage at AC OUTLET OFF.

4. OTHERS:
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

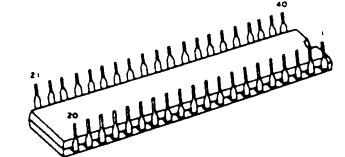
SWITCHES:
S1-1 : AC OUTLET (STAND-BY) ON - OFF
S1-2 : AC OUTLET (ON) ON - OFF
S1-3 : AC OUTLET (TIMER) ON - OFF
S2 : TIME ADJUST (FAST) ON - OFF
S3 : TIME ADJUST (SLOW) ON - OFF
S4 : TIME ADJUST (SEC RESET) ON - OFF
S5 : TIME ADJUST (REV) ON - OFF
S6 : MODE
SLEEP - TIMER SET STD-BY-TIMER SET ON-
CLOCK - SECOND - CLOCK ADJUST
S7 : POWER ON - OFF

The underlined indicates the switch position.

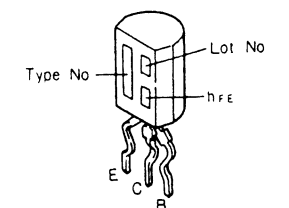
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

Appearance of Transistors and ICs

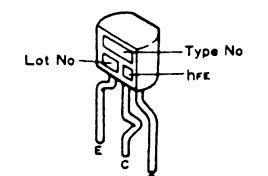
MN6076



2SD438/A/



2SC2603/A/



7. ELECTRICAL PARTS LIST

- NOTES:
- Parts without part number cannot be supplied.
 - Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
 - The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.
 - ★★ **GENERALLY MOVES FASTER THAN ★**
 - This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
 - When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
- | | | | | | | |
|------|----------------------|----------|---------|---|---|---|
| 560Ω | 56 × 10 ¹ | 561..... | RD1/4PS | Ⓜ | Ⓜ | J |
| 47kΩ | 47 × 10 ³ | 473..... | RD1/4PS | Ⓜ | Ⓜ | J |
| 0.5Ω | 0R5..... | | RN2H | Ⓜ | Ⓜ | K |
| 1Ω | 010..... | | RS1P | Ⓜ | Ⓜ | K |
- Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
- | | | | | | | | |
|--------|-----------------------|-----------|---------|---|---|---|---|
| 5.62kΩ | 562 × 10 ¹ | 5621..... | RN1/4SR | Ⓜ | Ⓜ | Ⓜ | F |
|--------|-----------------------|-----------|---------|---|---|---|---|

MISCELLANEOUS PARTS
P.C.BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.
	Timer assembly	GWX-895
	Switch assembly	

OTHERS

Mark	Symbol & Description	Part No.
⚠★★	RL1 Relay (AC OUTLET)	ASR-507
⚠	AC power cord	ADG-068
⚠★	T1 Power transformer (AC220V)	ATS-012
⚠★★	S7 Slide switch (POWER)	ASH-501
	AC socket (AC OUTLET)	AKP-026
⚠★★	FU1 Fuse (T2.5A/250V)	AEK-403

TIMER ASSEMBLY (GWX-895)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	Q1	MN6076
★★	Q2	2SD438
★★	Q3	2SC2603
★	D1,D2	10E2
★	D5-D7,D9	1S1555 (US1035)
★	D8	RD15EB (HZ15EB)
★	D3 LED (AC OUTLET,LED)	AEL-422
★	D4 LED (TIMER,GREEN)	AEL-421

SWITCHES

Mark	Symbol & Description	Part No.
★★	S2-S5 Tact switch (TIME ADJUST, ADJUST, SEC, RESET, REV)	ASG-711
★★	S6 Rotary switch (MODE SELECTOR)	ASD-080

CAPACITORS

Mark	Symbol & Description	Part No.
	C1,C2	CEA101M35L
	C3	CEA221M16L
	C5	CEA470M10L
	C4	CEA470M50L
	C6,C7	CKDYB222K50
	C8	CCDSL101J50

RESISTORS

Mark	Symbol & Description	Part No.
	R3	RD1/4PMFL220J
	Other resistors	RD1/4PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
★	V1 Fluorescent tube	AAV-020

SWITCH ASSEMBLY

SWITCH

Mark	Symbol & Description	Part No.
★★	S1 Push switch (AC OUTLET)	ASG-318

8. FOR S/G TYPE

The DT-555/S/G type is the same as the DT-555/NEM type with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		DT-555/NEM	DT-555/S/G	
⚠★★	Front panel assembly	ANB1223	ANB1224	
	AC power cord	ADG1021	ADG-070	
	FU1 Fuse (T2.5A/250V)	AEK-403	.....
⚠	Packing case	AHD1478	AHD1479	
	AC socket (AC OUTLET)	AKP-026	AKP-610	
	S9 Line voltage selector	.....	AKX-504	
⚠★★	Operating Instructions (English/German/French/Italian)	ARE1090	.....
	Operating Instructions (English)	.....	ARB1123	
	Slide switch (POWER,S7)	ASH-501	.....
⚠★★	Power transformer (AC220V)	ATS-012	.....
	Power transformer (AC110V,120V,220V,240V)	.....	ATT-951	
	Timer assembly	GWX-895	GWX-878	
⚠	Screw	.....	VTZ30P100FZK	
	Sub panel	AAK1552	AAK1553	

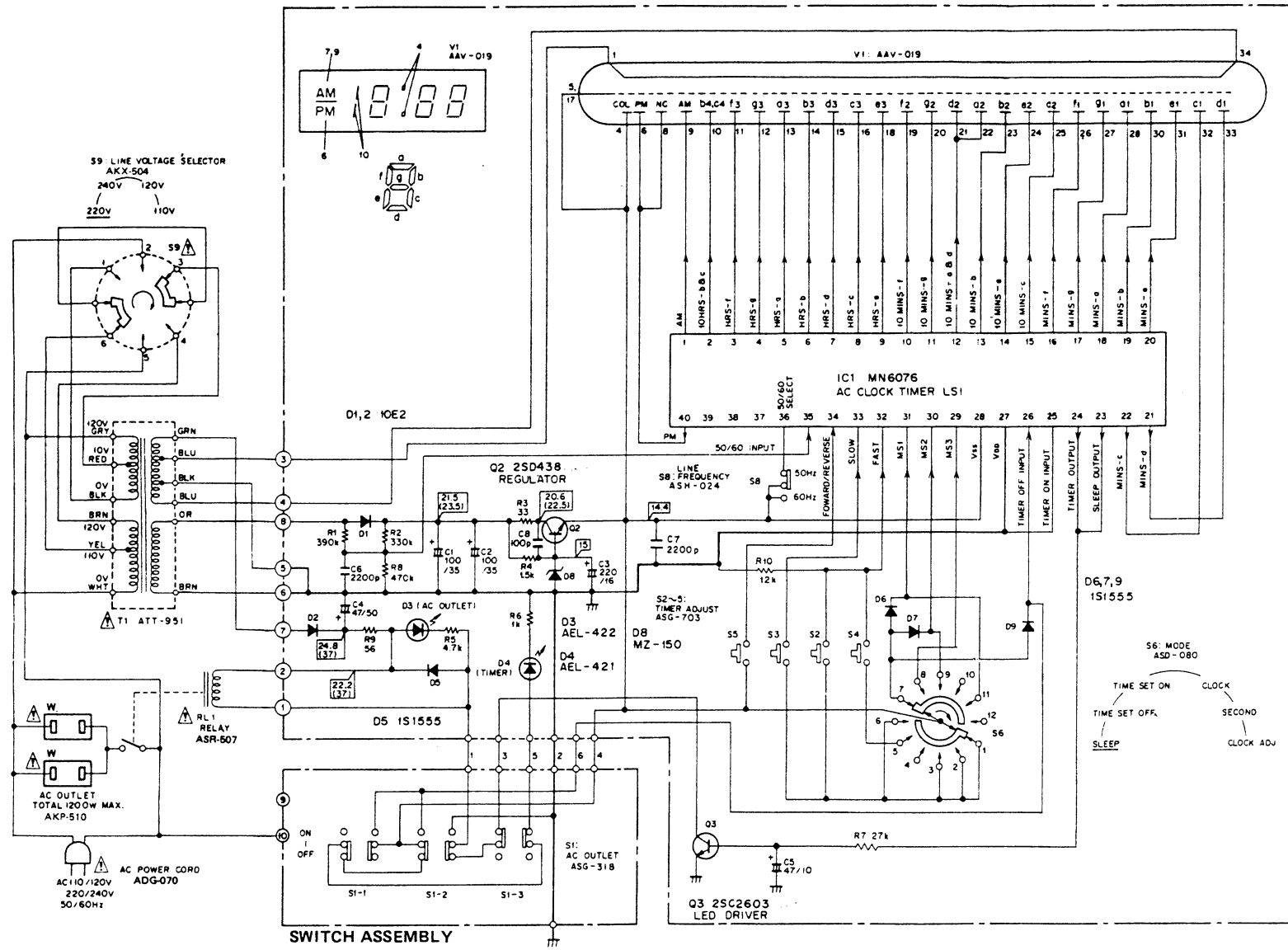
The Timer assembly (GWX-878) is the same as the Timer assembly (GWX-895) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		GWX-895	GWX-878	
★★	S8 Slide switch	.....	ASH-024	
	R9 Resistor	.....	RD1/4PM560J	
	R3 Resistor	RD1/4PMFL220J	RD1/4PM330J	
★	V1 Fluorescent tube	AAV-020	AAV-019	

• For S/G type

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

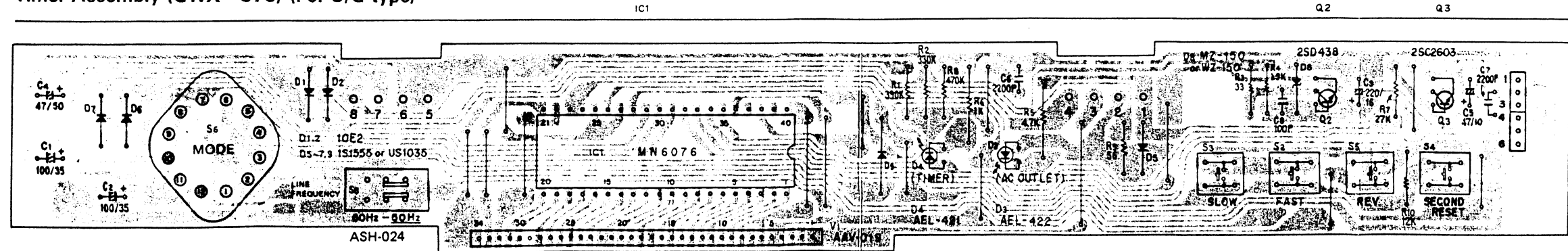
TIMER ASSEMBLY (GWX-878)



- 1. RESISTORS:
Indicated in Ω , $\frac{1}{2}W$, $\frac{1}{4}W$, $\pm 5\%$ tolerance unless otherwise noted k; k Ω , M; M Ω , (F); $\pm 1\%$, (G); $\pm 2\%$, (K); $\pm 10\%$, (M); $\pm 20\%$ tolerance
 - 2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
 - 3. VOLTAGE
□: DC voltage (V) at TIMER, RELAY ON
Value in () is DC voltage at AC OUTLET OFF
 - 4. OTHERS:
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- SWITCHES:
- S1-1 AC OUTLET(OFF) ON - OFF
 - S1-2 AC OUTLET (ON) ON - OFF
 - S1-3 AC OUTLET (TIMER) ON - OFF
 - S2 TIME ADJUST (FAST) ON - OFF
 - S3 TIME ADJUST (SLOW) ON - OFF
 - S4 TIME ADJUST (SEC RESET) ON - OFF
 - S5 TIME ADJUST (REV) ON - OFF
 - S6 MODE
SLEEP - TIMER SET OFF - TIMER SET ON -
CLOCK - SECOND - CLOCK ADJUST
 - S8 LINE FREQUENCY 50Hz - 60Hz
 - S9 LINE VOLTAGE SELECTOR
110V - 120V - 220V - 240V
- The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

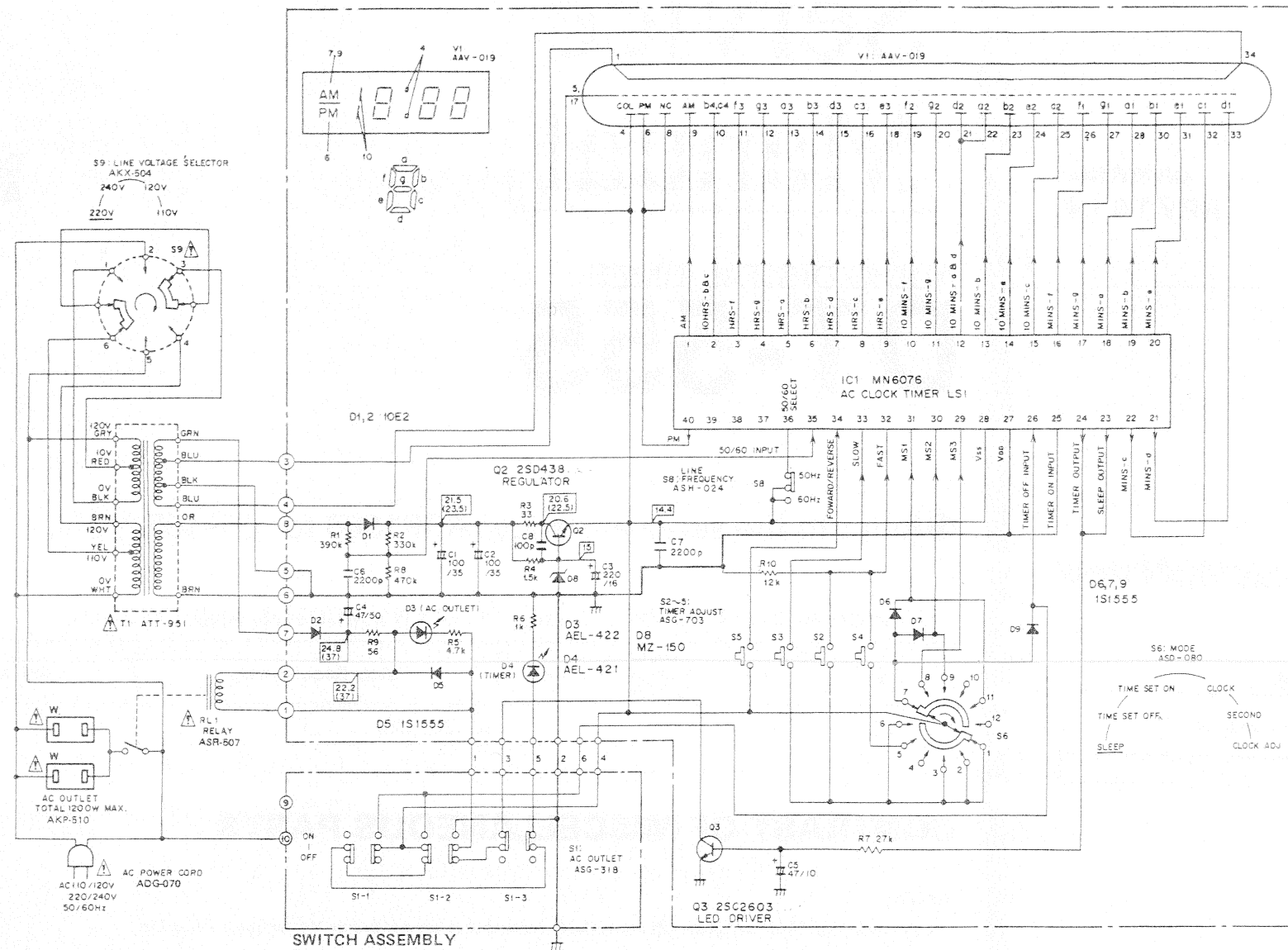
Timer Assembly (GWX-878) (For S/G type)



• For S/G type

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

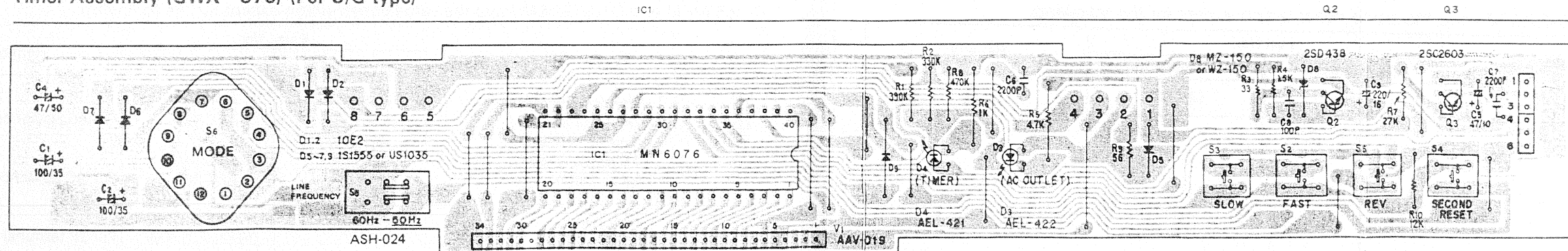
TIMER ASSEMBLY (GWX-878)



1. RESISTORS:
Indicated in Ω, kΩ, MΩ, ±5% tolerance unless otherwise noted; kΩ, MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance.
 2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted; pF. Indication without voltage is 50V except electrolytic capacitor.
 3. VOLTAGE:
□: DC voltage (V) at TIMER, RELAY ON
□: Value in () is DC voltage at AC OUTLET OFF
 4. OTHERS:
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- SWITCHES:
- S1-1: AC OUTLET (OFF) ON - OFF
 - S1-2: AC OUTLET (ON) ON - OFF
 - S1-3: AC OUTLET (TIMER) ON - OFF
 - S2: TIME ADJUST (FAST) ON - OFF
 - S3: TIME ADJUST (SLOW) ON - OFF
 - S4: TIME ADJUST (SEC RESET) ON - OFF
 - S5: TIME ADJUST (REV) ON - OFF
 - S6: MODE
SLEEP - TIMER SET OFF - TIMER SET ON -
CLOCK - SECOND - CLOCK ADJUST
 - S8: LINE FREQUENCY 50Hz - 60Hz
 - S9: LINE VOLTAGE SELECTOR
110V - 120V - 220V - 240V
- The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

Timer Assembly (GWX-878) (For S/G type)



Service Manual



ORDER NO.
RRV 1 6 1 4

AUDIO DIGITAL TIMER DT-555

- Refer to the service manuals **ARP2843** for DT-555/MEM and **ARP1566** for DT-555/NEM.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	DT-555		
MEM8	O	AC220 - 230V	

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

DT-555/MEM8 and DT-555/MEM have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		DT-555/MEM	DT-555/MEM8	
NSP	CE Mark Label	Not used	RRW1222	

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T-FZM APR. 1996 Printed in Japan



Service Manual

ORDER NO.
ARP2843

AUDIO DIGITAL TIMER DT-555

- Refer to the service manual ARP1566 for DT-555/NEM.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	DT-555		
MEM	O	AC 220 - 230V	

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

DT-555/MEM and DT-555/NEM have the same construction except for the following:

Mark	Symbol & Description	Parts No.		Remarks
		DT-555/NEM	DT-555/MEM	
Δ	T1 Power transformer	ATS-012	ATT1248	For AC power cord
Δ	2P terminal	.....	AKC-071	
Δ	F1 Fuse (2.5A 250V)	AEK-403	AEK-512	For AC power cord
Δ	AC power cord	ADG1021	ADG1049	
	Strain relief	AEC-882	
NSP	Rear panel Screw	ANC1293	ANC2210	For 2P terminal
		BBZ30P100FMC	

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